United States Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act", the

The City of Sitka, Alaska
Wastewater Treatment Facility

is authorized to discharge from a facility located at **Sitka, Alaska** (latitude: 57° 02: 53"; longitude: 135° 21: 13")

to receiving waters named **Middle Channel of Sitka Sound**,

in accordance with the discharge point, effluent limitations, monitoring requirements and other conditions set forth herein

This permit shall become effective

Signed this day of.

Director, Office of Water, Region 10
U.S. Environmental Protection Agency

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I. SPECIFIC LIMITATIONS AND REQUIREMENTS

A. Effluent Limitations

1. During the effective period of this permit, the permittee is authorized to discharge from outfall 001, subject to the restrictions set forth herein. This permit does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such waste streams.

2. There shall be no discharge of floating solids, visible foam, or oily wastes which produce a sheen on the surface of the receiving water.

3. The pH shall not be less than 6.5 standard units nor greater than 8.5 standard units.

4. The following effluent limits shall apply at all times:

Table 1. EFFLUENT LIMITATIONS

Effluent Parameter	Unit of Measurement	Monthly Average	Maximum Daily
Biochemical Oxygen Demand (BOD_5)[1]	mg/L	140	200
	lbs/day	2100	3000
Total Suspended Solids (TSS)[1]	mg/L	140	200
	lbs/day	2100	3000
Total Flow	mgd	1.8	5.3
Fecal Coliform	# FC/100 mL	1,000,000	1,500,000
Copper	µg/L	243	354
Dissolved Oxygen	mg/L	—	2.0[2]

Notes:
1. The monthly average effluent loading shall not exceed 70 percent of the monthly average influent loading for five day biological oxygen demand (BOD_5) and total suspended solids (TSS).
2. Minimum daily limitation

B. Monitoring Requirements

1. Overview

The permittee shall implement the plant influent/effluent, water quality, biological, and toxics control monitoring programs as described below. The primary objectives of these programs are as follows:

- Determine compliance with the NPDES Permit
- Determine compliance with State water quality criteria
- Aid in assessing water quality at discharge point
- Characterize toxic substances
- Monitor plant performance
- Determine compliance with the regulatory criteria of Section 301(h) of the Clean Water Act
- Determine level of bacteria concentration in nearshore waters
- Monitor for changes in sediment quality (organic enrichment, grain size distribution alteration, and pollutant contamination)
- Determine if pollutants from the discharge are accumulating in exposed biological organisms
- Provide data for evaluating reissuance of this permit

2. Reporting

Influent and effluent monitoring (Part B.3.) must be reported monthly on the Discharge Monitoring Report as required under Part II.C. of this permit. A report summarizing the results for Receiving Water Quality Monitoring Requirements (Part B.4.) and Biological Monitoring (Part B.5.) must be submitted to EPA Region 10 by December 31 of each year in which samples are collected. In addition, the reports shall explain how the objectives cited above in Part B.1. have been met.

3. Influent and Effluent Monitoring Requirements

During the effective period of this permit, the following monitoring requirements shall apply:

Table 2. INFLUENT/EFFLUENT MONITORING REQUIREMENTS

Effluent Parameter	**Sample Location**	**Sample Frequency**	**Sample Type**
Average Monthly Flow, mgd	Influent or Effluent	Continuous	Recording
BOD_5, mg/L	Influent & Effluent	Weekly	24-hour composite
TSS, mg/L	Influent & Effluent	Weekly	24-hour composite
Temperature, °C	Effluent	Weekly	Grab
pH, S.U.	Effluent	Weekly	Grab
Dissolved Oxygen, mg/L	Effluent	Weekly	Grab
Fecal Coliform Bacteria, Colonies/100 mL	Effluent	Monthly	Grab
Total Ammonia as N, mg/L	Effluent	Monthly	24-hour composite
Copper, µg/L[1]	Effluent	Monthly	24-hour composite
Toxic Pollutants and Pesticides[2]	Effluent	2/permit term[3]	Grab
Whole Effluent Toxicity (WET)[4], TU_c	Effluent	2/permit term[5]	24-hour composite

1. Copper results will be reported as total recoverable copper.
2. "Toxic pollutants" are defined as the 126 priority pollutants listed in 40 CFR 401.15.
3. The permittee shall conduct analyses of the effluent for toxic pollutants and pesticides during the dry season (July through September) in the first and fourth years of the permit term. Samples shall be grab samples. Sampling and analysis shall be conducted according to methods approved in 40 CFR Part 136.
4. See Part I.C.
5. Whole Effluent Toxicity monitoring shall be conducted quarterly in the first and fourth years of the permit term.

Influent and effluent monitoring results shall be reported monthly as specified in Part II.C. (Reporting of Monitoring Results).

4. Receiving Water Quality Monitoring Requirements

Water quality shall be monitored twice per year (once during the dry season (July through December) and once during the wet season (January through June)) in the second and fourth years of the permit. Four stations shall be sampled. Based on the sampling completed during the last permit, these sampling stations have been identified as Station A (western boundary of the ZID); Station B (eastern boundary of the ZID); Station C (a reference station west of the discharge); and Station D (a reference station east of the discharge). These previously-established stations shall continue to be sampled under this permit. Fecal coliform bacteria shall be measured annually in July at seven stations that have been established during sampling conducted under the previous permit. Sampling stations are identified in Table 3. During the fourth year of the permit only, fecal coliform shall be monitored five times, once in April, June, July, August, and November. For fecal coliform monitoring, the ambient samples shall be collected on the same day that the effluent is sampled for fecal concentration.

The following parameters shall be measured at the depths, locations, and frequency indicated in Table 3. The dissolved oxygen, pH, salinity, and temperature zone of initial dilution (ZID) is defined as a rectangle 117.8 m (386.5 ft) long (perpendicular to shore) and 58.2 m (190.9 ft) wide centered on the diffuser.

Monitoring of dissolved oxygen, pH, salinity, and temperature shall be reported on the annual report. Monitoring of fecal coliform and floating solids, visible foam, and oily wastes shall be on monthly DMRs and in the annual report.

Table 3. RECEIVING WATER QUALITY MONITORING REQUIREMENTS			
Parameter	Station Location	Depth[1]	Monitoring Frequency
Temperature, °C	Station A (western edge of ZID) Station B (eastern edge of ZID) Station C (reference station west of discharge) Station D (reference station east of discharge)	1.0 m below surface mid-depth 1.0 m above bottom	4/permit term: Dry season, permit years 2 and 4; wet season, permit years 2 and 4
Salinity, ppt	Station A (western edge of ZID) Station B (eastern edge of ZID) Station C (reference station west of discharge) Station D (reference station east of discharge)	1.0 m below surface mid-depth 1.0 m above bottom	4/permit term: Dry season, permit years 2 and 4; wet season, permit years 2 and 4
Dissolved Oxygen (DO), mg/L	Station A (western edge of ZID) Station B (eastern edge of ZID) Station C (reference station west of discharge) Station D (reference station east of discharge)	1.0 m below surface mid-depth 1.0 m above bottom	4/permit term: Dry season, permit years 2 and 4; wet season, permit years 2 and 4
pH	Station A (western edge of ZID) Station B (eastern edge of ZID) Station C (reference station west of discharge) Station D (reference station east of discharge)	1.0 m below surface mid-depth 1.0 m above bottom	4/permit term: Dry season, permit years 2 and 4; wet season, permit years 2 and 4
Secchi disk	Station A (western edge of ZID) Station B (eastern edge of ZID) Station C (reference station west of discharge) Station D (reference station east of discharge)	Surface	4/permit term: Dry season, permit years 2 and 4; wet season, permit years 2 and 4

Table 3. RECEIVING WATER QUALITY MONITORING REQUIREMENTS

Parameter	Station Location	Depth[1]	Monitoring Frequency
Fecal coliform bacteria	Station 1: Shoreline area of human use, close to the discharge point/diffuser Station 2: Shoreline area just outside of the point where the out edge of the mixing zone[2] touches the shoreline near the Sitka National Historical Park. Station 3: Outside the edge of the mixing zone between Passage and Smith Islands. Station 4: Shoreline area of human use inside the mixing zone in Sitka Harbor near the boat ramp on Japonski Island. Station 5: Outside the edge of the mixing zone between Morne Island and the Sitka National Historical Park. Station 6: Outside the edge of the mixing zone between Whale and Kayak Islands. Station 7: 500 m southeast of the discharge (between Rockwell and Beardslee Islands)	Surface	July of each year. In addition, in the fourth year of the permit, monitoring shall be conducted in the following months: April, June, July, August, and November

1. In year four of the permit, Station C will be measured at the surface and at depth intervals of five meters.
2. The mixing zone for fecal coliform bacteria is defined as a circle of 1600 meter radius, centered on the outfall line and over the diffuser and extending from the marine bottom to the surface. Outside this mixing zone the fecal coliform concentrations shall not exceed a monthly average of 14 FC/100 mL and a daily maximum of 43 FC/100 mL. Also, fecal coliform concentrations shall not exceed 200FC/100mL at the shoreline within the designated mixing zone.

5. Biological Monitoring for Benthic Infauna and Sediment Analyses

   a. Benthic infauna qualitative observations are required in August of the second and fourth year of the permit. The sampling shall be coordinated, to the extent practicable, with the sampling times for the water quality monitoring program.

   b. Benthic infauna observations will be made at the following three stations:

      - Station 1, at the northwest ZID boundary.

      - Station 2, approximately 150 ft to the northwest beyond ZID boundary

      - Station 3, the northwest reference station

      These stations have been previously established by Woodward-Clyde during the previous permit. These previously established stations should continue to be observed to ensure that comparisons can be made to previous biological monitoring results.

      Once on site, sampling stations shall be verified using an electronic navigational aid that ensures that sampling stations occupied are the same stations sampled during previous biological surveys.

      If benthic infauna observations required above indicate evidence of rippling or settleable solids deposition, or impacts on the benthic community are observed at the non-reference stations, then sediment sampling will be required during August of the fifth year of the permit. Sediment sampling conducted in the fifth year would include sampling for total volatile solids (TVS) and benthic infauna at the three benthic infauna observation stations and shall follow the procedures specified in paragraph c. and d. below.

      c. Sample collection for TVS and benthic infauna.

         (1) At each sampling station two (2) replicate sediment samples for TVS and three (3) replicate samples for benthic infauna shall be collected.

         (2) TVS core samples shall be taken adjacent to the samples for benthic infauna.

(3) Sediment core samples shall be collected for TVS analysis by means of a core sampler with an approximate volume of 250 to 500 ml. The core sampler shall be inserted vertically into the sediment without disturbing the surface layer to allow collection of an undisturbed sample of the surface layer. Equal volumes shall be collected for each TVS core sample. The TVS core samples shall be taken to a sediment depth of no more than approximately 5 to 7 cm.

(4) Benthic infauna samples shall be collected with a cylindrical core sampler with a cross-sectional area of 0.015 m^2 (a two pound coffee can may be used). Samples shall be taken to a depth of 10 cm (4 inches).

(5) The diver collecting samples shall be qualified to make observations of the benthic community, as demonstrated, for example, by an educational background that includes marine invertebrate zoology. To the extent possible, the same diver should be used for all sampling efforts, to assure consistent observation.

d. Sample Processing for TVS and benthic infauna

(1) Sediment samples for TVS shall be processed as follows:

· Within four (4) hours of collection, approximately 25 - 50 g of sediment core (corresponding to the top 1 inch (2.5 cm) of the sediment) shall be removed from each replicate sample and placed in an individual plastic bag or glass jar, labeled, and frozen.

· TVS analysis using procedures approved at 40 C.F.R. 136 shall be completed within one month of collection. The same procedures shall be used for both years' analyses of TVS.

· If wood chips or other large organic debris (bark) are present in the sample, the sediment used for TVS analysis shall be passed through a coarse screen (approximately 1/4 inch mesh) using a minimum amount of seawater as washwater. TVS analysis shall then be conducted on the

screened sediment, the washwater, and any gravel, shells, or pebbles retained by the screen.

· The dry weight of any wood chips or other large organic debris within the entire sediment core shall be noted as well as the surface area and volume of the core samples.

(2) Sediment samples for benthic infauna shall be processed as follows:

· Samples shall be sieved through a 1.0 mm screen. Material remaining on the screen shall be placed in individual glass jars or plastic bags, labeled with the collection site and date, and preserved with buffered 10% formalin (buffered with borax) within four hours of collection.

· Within one week of collection the formalin shall be carefully poured from these samples and replaced with 70% ethanol.

· Stored samples for benthic community analysis shall be inspected every two to three months and any ethanol which has evaporated from the jars shall be replaced.

· Analysis of stored benthic infauna samples may be required in the future if EPA Region 10 determines that substantial changes have occurred in the TVS content of sediments in the area of the discharge. The decision on whether or not the stored sediment samples must be analyzed for benthic species composition will be made after Region 10 has reviewed diver observations and TVS analyses.

e. Biological monitoring reports shall:

(1) be submitted to EPA Region 10 by December 31 of the second and fourth years of this permit term;

(2) include a map of the sampled locations that also shows the outfall and the ZID;

(3) include detailed field observations of the biological and sediment conditions at all of the sampled stations (including, but not limited to, the numerically dominant species, the approximate number of individuals of each species, differences in appearance of surface sediments at the locations sampled, etc.);

(4) include notes regarding sampling procedures, number of samples collected, and location where the samples were collected; and

(5) include the results of the benthic community and TVS analyses from each location.

After EPA Region 10 reviews the above information, a list of organisms found in each replicate sample collected for benthic community analysis may be required. If required, the archived benthic infauna samples shall be identified to the species level and enumerated for each replicate. The species identification and enumeration for each replicate sample shall be submitted to EPA Region 10 within four months of the date it is requested.

C. Whole Effluent Toxicity (WET) Testing Requirements.

The Permittee shall conduct chronic toxicity testing for determining the toxicity of the effluent from outfall 001 in accordance with subsections 1-7 below. Testing shall be conducted in the first and fourth years of the permit term.

1. The Permittee shall conduct chronic toxicity testing in the first and fourth years of the permit with one of the following organisms:

   a. Sand dollar (Dendraster excentricus)
   b. Green, purple or red sea urchin (Strongylocentrotus droehbachiensis, Strongylocentrotus purpuratus, Strongylocentrotus franciscanus, respectively)
   c. Pacific oyster (Crassostrea gigas)
   d. Bay mussel (Mytilus edulis)

   Species shall be selected based on availability of organisms in spawning condition. However, previous WET test have been conducted with the

purple urchin, Strongylocentrotus purpuratus, and it is recommended that future tests also be conducted with this species.

The presence of chronic toxicity shall be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*. EPA/600/R-95/136, August 1995.

Results shall be reported in TUc (chronic toxic units). TUc = 100/No Observed Effect Concentration (NOEC) in percent effluent concentration.

2. Toxicity Trigger

Chronic toxicity testing requirements are triggered when the NOEC equals or exceeds 122 TUc. When chronic toxicity testing requirements are triggered, the permittee shall comply with the requirements set out in Parts 5 and 6 below.

3. Quality Assurance

a. A series of five dilutions and a control shall be tested. The series shall include the receiving water concentration (RWC), 1.0 percent effluent, two dilutions above the RWC, and two dilutions below the RWC.

b. If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient.

c. If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria (TAC) as specified in the test methods manual, then the permittee must re-sample and re-test as soon as possible.

d. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity test (i.e., same test duration, etc.).

e. Control and dilution water shall be laboratory water as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water shall also be used.

Receiving water may be used as control and dilution water upon notification of EPA. In no case shall water that has not met test acceptability criteria be used as dilution water.

f. Chemical testing for the parameters listed in Part I.A.1 of this permit shall be performed on a split sample collected for WET testing. To the extent that the timing of sample collection coincides with that of the sampling required in Part I.A.1. of this permit, chemical analysis of the split sample will fulfill the requirements of Part I.A.1.

4. Preparation of Initial Investigation Toxicity Reduction Evaluation (TRE) Plan

Prior to initiation of the toxicity testing required by this permit, the permittee shall submit to EPA a copy of the permittee's initial investigation TRE workplan. This plan shall describe the steps the permittee intends to follow in the event that toxicity testing requirements as described in Part I.C.2. above, are detected, and should include at a minimum:

a. A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, treatment system efficiency;

b. A description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility; and

c. If a toxicity identification evaluation (TIE) is necessary, who will conduct it (i.e., in-house or other).

5. Accelerated testing

a. If chronic toxicity testing requirements as defined in Part I.C.2. above are triggered, the permittee shall implement the initial investigation workplan. If implementation of the initial investigation workplan indicates the source of toxicity (for instance, a temporary plant upset), then only one additional test is necessary. If toxicity is detected in this test, then the following paragraph (C.5.b.) shall apply.

b. If chronic toxicity testing requirements as defined in Part I.C.2. above are triggered, and toxicity is detected in the test required under Part I.C.5.a. above, then the permittee shall conduct six more tests, bi-weekly (every two weeks), over a twelve-week period. Testing shall commence within two weeks of receipt of the sample results of the exceedance

6. Toxicity Reduction Evaluation (TRE)

a. If chronic toxicity, as defined Part I.C.2., is detected in any of the six additional tests required under Part I.C.5.b., then, in accordance with the permittee's initial investigation workplan and EPA manul EPA 833-B-99-002 (Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants), the permittee shall initiate a TRE within fifteen (15) days of receipt of the sample results of the exceedance. The permittee will develop as expeditiously as possible a more detailed TRE workplan, which includes:.

i. further actions to investigate and identify the cause of toxicity;
ii. actions the permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and
iii. a schedule for these actions.

b. The permittee may initiate a toxicity identification evaluation (TIE) as part of the overall TRE process described in the EPA acute and chronic TIE manuals EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).

c. If none of the six tests required under Part I.C.5.b. above indicated toxicity, then the permittee may return to the normal testing frequency.

d. If a TIE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

7. Reporting:

a. Results of toxicity tests, including any accelerated testing conducted during the month, shall be reported on the Discharge Monitoring Report (DMR) for the month in which the tests are conducted.

b. The full report shall be submitted by the end of the month in which the DMR is submitted.

c. The full report shall consist of : (1) the toxicity test results; (2) the dates of sample collection and initiation of each toxicity test; (3) the flow rate at the time of sample collection; and (4) the results of the effluent analysis for chemical parameters required for the outfall as defined in Part I.A.1. of the permit.

d. Test results for chronic tests shall be reported according to the chronic manual chapter on Report Preparation.

D. Sewage Sludge Management Requirements

The permittee shall ensure that an updated biosolids permit application (Form 2S) is on file with the EPA.

E. Nonindustrial Source Control Program

1. The permittee shall review and if necessary update its public education program. Print and/or electronic media may be used in addition to, or instead of, pamphlets.

The program shall address such issues as:

· non-hazardous alternatives to hazardous household products and pesticides,

· proper disposal of hazardous wastes.

This information shall be distributed to the public at a minimum by the following dates:

November 15, 2002
November 15, 2004
November 15, 2006

Public education program information shall be made available to all new service connections.

2. A report shall be submitted annually with the December DMR summarizing the actions undertaken during the previous year to control nonindustrial sources of toxic pollutant and pesticides (including, but not limited to, the activities outlined in paragraph 1 above).

F. Operation and Maintenance Plan Review

1. Within 180 days after the effective date of this permit, the permittee shall review its operation and maintenance (O&M) plan and ensure that it includes appropriate best management practices (BMPs); the plan must be reviewed annually thereafter. BMPs include measures which prevent or minimize the potential for the release of pollutants to Middle Channel of Sitka Sound. The O&M Plan shall be retained on site and made available to EPA and ADEC upon request.

2. The permittee shall develop a description of pollution prevention measures and controls appropriate for the facility. The appropriateness and priorities of controls in the O&M Plan shall reflect identified potential sources of pollutants at the facility. The description of BMPs shall address, to the extent practicable, the following minimum components:

- Spill prevention and control;
- Optimization of chemical usage;
- Preventive maintenance program;
- Minimization of pollutant inputs from industrial users;
- Research, develop and implement a public information and education program to control the introduction of household hazardous materials to the sewer system; and
- Water conservation.

G. Quality Assurance Requirements

1. The Permittee shall develop a Quality Assurance Plan. The primary purpose of the Quality Assurance Plan shall be to assist in planning for the collection and analysis of samples in support of the permit and in explaining data anomalies when they occur.

2. Throughout all sample collection and analysis activities, the Permittee shall use the EPA approved quality assurance, quality control, and chain-of-custody procedures described in:

   a. *Requirements for Quality Assurance Project Plans,* EPA QA/R-5 EPA, and
   b. *Guidance on Quality Assurance Project Plans,* EPA QA/G-5

   The following reference may be helpful in preparing the Quality Assurance Plan for this permit: *The Volunteer Monitors Guide to Quality Assurance Project Plans* EPA 841-B-96-003, September 1996.

3. The plan shall be completed within 120 days of the effective date of this NPDES permit. The Permittee shall keep a copy of the permit on site at all times.

4. At a minimum the plan shall include the following:

   - Sampling techniques (field blanks, replicates, duplicates, control samples, etc).
   - Sampling preservation methods.
   - Sampling shipment procedures.
   - Method of station location and relocation.
   - Instrument calibration procedures and preventive maintenance (frequency, standard, spare parts).
   - Qualification and training of personnel.
   - Analytical methods (including quality control checks, quantification/detection levels).

5. Name(s), address(es) and telephone number(s) of the laboratories, used by or proposed to be used by the Permittee, shall be specified in the Quality Assurance Plan.

H. Shoreline Signs

The Permittee shall place signs on the shoreline near the mixing zone and outfall line. The signs should state that treated domestic wastewater is being discharged, the name and owner of the facility and the approximate location and size of the mixing zone. The signs should inform the public that certain activities, such as the harvesting of shellfish for raw consumption and bathing should not take place in the mixing zone and give a contact number for additional information.

I. Definitions

1. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

2. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

3. "Biosolids" means any sludge or material derived from sludge that can be beneficially used. Beneficial use includes, but is not limited to, land application to agricultural land, forest land, a reclamation site or sale or give away to the public for home lawn and garden use.

4. "Chronic toxicity" measures a sublethal effect (e.g., reduced growth, reproduction) in an effluent or ambient waters compared to that of the control organisms.

5. "Chronic toxic unit (TU_c)" is a measure of chronic toxicity. The number of chronic toxic units in the effluent is calculated as 100/NOEC, where the NOEC is measured in percent effluent.

6. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

7. "Dry Weight-basis" means 100 percent solids (i.e., zero percent moisture).

8. A "Grab" sample is a single sample or measurement taken at a specific time or over as short a period of time as is feasible.

9. "Inhibition concentration (IC)" is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., the EPA Interpolation Model).

10. "IC_{25}" means the estimated toxicant concentration that would cause a 25 percent reduction in a nonlethal biological measurement of the test organisms, such as reproduction or growth.

11. "mgd" means million gallons per day.

12. "Maximum daily discharge limitation" means the highest allowable "daily discharge".

13. "Method detection limit (MDL)" is the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero as determined by a specific laboratory method (40 CFR 136).

14. "No observed effect concentration (NOEC)" is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significant different from controls.)

15. "Pathogen" means an organism that is capable of producing an infection or disease in a susceptible host.

16. "Pollutant", for the purposes of this permit, is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organisms that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

17. "Sewage sludge" means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage and/or a combination of domestic sewage and industrial waste of a liquid nature in a Treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the incineration of sewage sludge or grit and screenings generated during preliminary

treatment of domestic sewage in a Treatment Works. These must be disposed of in accordance with 40 CFR 258.

18. "Suites of tests" means the two or three species used for testing during the permit term.

19. A "24-hour composite" sample shall mean a flow-proportioned mixture of not less than eight discrete aliquots. Each aliquot shall be a grab sample of not less than 100 mL and shall be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

20. A "TRE" is a site-specific study conducted in a stepwise process to narrow the search for effective control measures for effluent toxicity.

21. "Toxic pollutants" are those substances listed in 40 CFR 401.15.

22. "Pesticides" are Demeton, Guthion, Malathion, Mirex, Methoxychlor and Parathion (as listed in 40 CFR 125.58).

23. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

24. "Vector attraction" is the characteristic of sewage sludge that attracts rodents, flies, mosquitos or other organisms capable of transporting infectious agents.

25. The "ZID" is the Zone of Initial Dilution. The ZID is defined as a rectangle 117.8 m (386.5 ft) long (perpendicular to shore) and 58.2 m (190.9 ft) wide centered on the diffuser.

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part I shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit.

C. Reporting of Monitoring Results. Monitoring results shall be summarized each month on the Discharge Monitoring Report (DMR) form. The reports shall be submitted monthly and are to be postmarked by the 10th day of the following month. Legible copies of these, and all other reports, shall be signed and certified in accordance with the requirements of Part IV.J. Signatory Requirements, and submitted to the Director, Office of Water and the State agency at the following addresses:

original to: United States Environmental Protection Agency (EPA)
Region 10
NPDES Compliance Unit
1200 Sixth Avenue, OW-133
Seattle, Washington 98101

copy to: Alaska Department of Environmental Conservation
Division of Air and Water Quality
410 Willoughby Avenue, Suite 303
Juneau, Alaska 99801
(907)465-5300
(907)465-5274 (fax)
May be submitted via scanned and saved (.pdf, .bmp or .tif) document to :wqpermit@envircon.state.ak.us

D. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

E. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements,

2. The individual(s) who performed the sampling or measurements,

3. The date(s) analyses were performed,

4. The individual(s) who performed the analyses,

5. The analytical techniques or methods used, and

6. The results of such analyses.

F. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time. Data collected on-site, copies of DMRs, and a copy of this NPDES permit must be maintained on-site during the duration of activity at the permitted location.

G. Twenty-four Hour Notice of Noncompliance Reporting

1. The following occurrences of noncompliance shall be reported to EPA and ADEC by telephone within 24 hours from the time the permittee becomes aware of the circumstances:

   a. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part **III.G. Bypass of Treatment Facilities**),

   b. Any upset which exceeds any effluent limitation in the permit (See Part **III.H. Upset Conditions**), or

   c. Violation of a maximum daily discharge limitation for those toxic or hazardous pollutants identified within Table1 of Section I.A.

2. A written submission shall also be provided to EPA and ADEC within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance and its cause,

b. The period of noncompliance, including exact dates and times,

c. The estimated time noncompliance is expected to continue if it has not been corrected, and

d. Steps taken or planned to reduce, eliminate, and prevent re-occurrence of the noncompliance.

3. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Unit in Seattle, Washington, by phone, (206) 553-1846.

4. Reports shall be submitted to the addresses in Part **II.C. Reporting of Monitoring Results**.

H. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part II.C. are submitted. The reports shall contain the information listed in Part II.H.2.

I. Inspection and Entry. The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit,

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit,

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for: enforcement action; permit termination, revocation and re-issuance, or modification; or denial of a permit renewal application. The permittee shall give advance notice to the Director and ADEC of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions

1. Civil and Administrative Penalties. Any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be subject to a civil or administrative penalty, not to exceed the maximum amounts authorized by Sections 309(d) and 309(g) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note).

2. Criminal Penalties

a. Negligent Violations. Any person who negligently violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(1) of the Act.

b. Knowing Violations. Any person who knowingly violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(2) of the Act.

c. Knowing Endangerment. Any person who knowingly violates a permit condition implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine and/or imprisonment as specified in Section 309(c)(3) of the Act .

d. False Statements. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this Act, shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(4) of the Act.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize, or prevent, any discharge, or sludge use or disposal, in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed, or used, by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances. Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

G. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.

2. Notice

a. Anticipated Bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass.

b. Unanticipated Bypass. The permittee shall submit notice of an unanticipated bypass as required under Part **II.G. Twenty-four Hour Notice of Noncompliance Reporting**.

3. Prohibition of Bypass

a. Bypass is prohibited and the Director may take enforcement action against a permittee for a bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage,

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and

(3) The permittee submitted notices as required under paragraph 2 of this section.

b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determined that it will meet the three conditions listed above in paragraph 3.a. of this section.

H. Upset Conditions

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. No determination made during administrative review of claims that

noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Necessary upset demonstration conditions. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset,

   b. The permitted facility was at the time being properly operated,

   c. The permittee submitted notice of the upset as required under Part **II.H. Twenty-four Hour Notice of Noncompliance Reporting**, and

   d. The permittee complied with any remedial measures required under Part **III.D. Duty to Mitigate**.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

IV. GENERAL REQUIREMENTS

A. Notice of New Introduction of Pollutants

1. The permittee shall provide adequate notice to the Director, Office of Water, and ADEC of:

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to sections 301 or 306 of the Act if it were directly discharging those pollutants, and

   b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

2. For the purposes of this section, adequate notice shall include information on:

a. The quality and quantity of effluent to be introduced into such treatment works, and

b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from such publicly owned treatment works.

B. Control of Undesirable Pollutants. Under no circumstances shall the permittee allow introduction of the following wastes into the waste treatment system:

1. Wastes which will create a fire or explosion hazard in the treatment works;

2. Wastes which will cause corrosive structural damage to the treatment works, but in no case, wastes with a pH lower than 5.0, unless the treatment works is designed to accommodate such wastes;

3. Solid or viscous substances in amounts which cause obstructions to the flow in sewers, or interference with the proper operation of the treatment works;

4. Waste waters at a flow rate and/or pollutant discharge rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency; and

5. Any pollutant, including oxygen demanding pollutants (e.g., BOD, etc.) released in a discharge of such volume or strength as to cause interference in the treatment works.

C. Requirements for Industrial Users. The permittee shall require any industrial user of these treatment works to comply with any applicable requirements of sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR 403.

D. Planned Changes. The permittee shall give notice to the Director and ADEC as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit. Notice is also required when the alteration or addition results in a significant change in the permittee's sludge use or disposal practices, including

notification of additional use or disposal sites not reported during the permit application process.

E. Anticipated Noncompliance. The permittee shall give advance notice to the Director and ADEC of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

F. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

G. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

H. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

I. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director or ADEC, it shall promptly submit such facts or information.

J. Signatory Requirements

1. All applications, reports, or information submitted to the Director shall be signed and certified.

2. All permit applications shall be signed by either a principal executive officer or ranking elected official.

3. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Director, and

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

4. Changes to authorization. If an authorization under paragraph IV.J.3 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.J.3. must be submitted to the Director prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

5. Certification. Any person signing a document under this section shall make the following certification:

> "*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*"

K. Availability or Reports. Except for data determined to be confidential under 40 CFR 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

L. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any

responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act.

M. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private infringement of federal, state, or local laws or regulations.

N. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

O. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date,

2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them, and

3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

P. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by section 510 of the Act.

Q. Reopener Provision. This permit is subject to modification, revocation and reissuance, or termination at the request of any interested person (including the permittee) or upon EPA initiative. However, permits may only be modified, revoked or reissued, or terminated for the reasons specified in 40 CFR Parts 122.62, 122.63 or 122.64, and 40 CFR Part 124.5. This includes new information which was not available at the time of permit issuance and would have justified the application of different permit conditions at the time of issuance and includes, but is not limited to, future monitoring results. All requests for permit

modification must be addressed to EPA in writing and shall contain facts or reasons supporting the request.